



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,765	11/10/2003	Francesco Radice	856063.747	4374
38106	7590	08/08/2005	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVENUE, SUITE 6300 SEATTLE, WA 98104-7092			GLENN, KIMBERLY E	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,765

Applicant(s)

RADICE ET AL.

Examiner

Kimberly E. Glenn

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4 and 6-8 is/are allowed.
- 6) ☒ Claim(s) 5,9,11,12,14-17 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5, 9, 11, 12, 14, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuo US Patent 6,317,016.

Kuo disclose in figure 2b, a differential gyrator-based signal filter 200, for an LC ladder implementation. The gyrator-based signal-filter 200 includes a plurality of transconductance cells G1-G15, and a plurality of capacitors C1-C7 and CL2, CL4 and CL6. The plurality of transconductance cells are arranged to simulate the inductance ladder section and at least on subsequent inductance ladder section. The first and subsequent inductance ladder section has at least one associated capacitance value scaled to accommodate a feed forward and feedback path through the transconductance cells. The gyrator-based signal-filter 200 implements an LC ladder filter with three inductors represented by three gyrator-capacitor arrangements. The three gyrator-capacitor arrangements respectively correspond to the three LC ladder filter sections of FIG. 2a. For example, G3, G4, G5, G6 together with CL2 form an inductor. The differential outputs are connected to capacitors C7. (Column 5; line 26-47) With regards to claims 9, 11, 12, 14, figure 3 shows a transconductance cell with a common mode feedback connected to differential outputs for implementing the f

Art Unit: 2817

disclosed filter circuit. The common mode feedback circuit 312 includes a high impedance circuit 360 and a signal sampling circuit 362. The high impedance circuit compares the sampled common mode voltage to a reference voltage and provides a common mode feedback to the transconductance cell 310. The transconductance cell includes MOS transistors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo US Patent 6,317,016 in view of Reed et al US Patent 6,614,609.

Kuo disclose in figure 2b, a differential gyrator-based signal filter 200, for an LC ladder implementation. The gyrator-based signal-filter 200 includes a plurality of transconductance cells G1-G15, and a plurality of capacitors C1-C7 and CL2, CL4 and CL6. The plurality of transconductance cells are arranged to simulate the inductance ladder section and at least on subsequent inductance ladder section. The first and subsequent inductance ladder section has at least one associated capacitance value scaled to accommodate a feed forward and feedback path through the transconductance cells. The gyrator-based signal-filter 200 implements an LC ladder filter with three inductors represented by three gyrator-capacitor arrangements. The three gyrator-capacitor arrangements respectively correspond to the three LC ladder

Art Unit: 2817

filter sections of FIG. 2a. For example, G3, G4, G5, G6 together with CL2 form an inductor. The differential outputs are connected to capacitors C7. (Column 5; line 26-47)

Thus, Kuo is shown to teach all the limitation of the claim with the exception of a disk drive read channel signal line coupled to the circuit input to provide data stored on disk drive to the circuit.

Reed et al discloses in prior art figure 1, an example of the user data path for a disk drive system 100. Disk drive system 100 includes a disk device 102 and associated control circuitry 104. Disk device 102 includes storage media 106. Some examples of storage media 106 include magnetic disks and optical disks. Control circuitry 104 includes write channel 110 and read channel 120. Write channel 110 includes encoder 112, compensation 114, and write interface 116 connected in series. Read channel 120 includes sampler 121, adaptive filter 122, interpolator 123, detector 124, and decoder 125 connected in series. Interface 116 and sampler 121 are coupled to disk device 102.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiates the claimed apparatus from a prior art apparatus satisfy the claimed structural limitations.

Allowable Subject Matter

Claims 1, 3, 4, 6, 7 and 8 are allowed.

Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: With regards to claims 1, 3, 6, and 8, the prior art of record does not disclose or fairly teach a each integrator having a bipolar transistor input circuit and a MOS transistor bias circuit portion and having a least on output of the second integrate feedback connected to the bias circuit portion of the same integrator through a feedback block. With regards to claim 4, the prior art of record does not disclose or fairly teach the outputs of the first integrator being connected to the inputs of the second integrator and being coupled to ground by respective diodes. With regard to claim 7, the prior art of record does not disclose or fairly teach using the specific equation recited in claim 7 in order to emulate a capacitor.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E. Glenn whose telephone number is (571)-272-1761. The examiner can normally be reached on Monday-Friday 7:30 to 4:00.

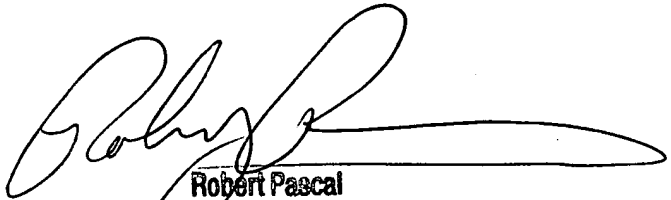
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2817

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly E Glenn
Examiner
Art Unit 2817

keg



Robert Pascal
Supervisory Patent Examiner
Technology Center 2800